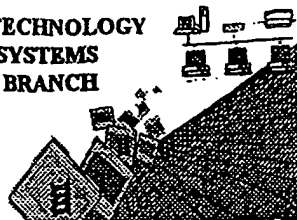


BIOTECHNOLOGY
SYSTEMS
BRANCH



RAW SEQUENCE LISTING
ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/b10,873
Source: IFW16
Date Processed by STIC: 10-14-04

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER
VERSION 4.2 PROGRAM ACCESSIBLE THROUGH THE U.S. PATENT AND
TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 06/05/04):
U.S. Patent and Trademark Office, 220 20th Street S., Customer Window, Mail Stop Sequence, Crystal Plaza Two, Lobby, Room 1B03, Arlington, VA 22202

Revised 05/17/04



DATE: 10/14/2004

TIME: 10:23:26

Output Set: N:\CRF4\10142004\J010873.raw

Does Not Comply
Corrected Diskette Needed

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125 <210> SEQ ID NO: 2
126 <211> LENGTH: 513
127 <212> TYPE: PRT
128 <213> ORGANISM: Caenorhabditis elegans
130 <400> SEQUENCE: 2
131 Met Arg Ser Phe Trp Leu Phe Leu Leu Leu Leu Leu Phe Cys Ile Ser
132 1 5 10 15
134 Phe Ile Lys Leu Thr Glu Gly Asn Glu Asp Ala Lys Arg Leu Tyr Asp
135 20 25 30
137 Asp Leu Met Val Asn Tyr Asn Arg His Arg Arg Pro Ser Thr Ser Pro
138 35 40 45
140 Asn Lys Pro Leu Thr Ile Lys Leu Lys Leu Lys Leu Arg Leu Ser Gln
141 50 55 60
143 Ile Ile Asp Val His Glu Ile Asp Gln Ile Met Thr Cys Ser Val Trp
144 65 70 75 80
146 Leu Lys Gln Thr Trp Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
147 85 90 95
149 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ile Trp Val
150 100 105 110
152 Pro Asp Ile Val Leu Tyr Asn Asn Ala Asp Ser Asn Tyr Asn Ile Thr
153 115 120 125
155 Ile Ser Thr Lys Ala Thr Leu His Tyr Thr Gly Glu Val Thr Trp Glu
156 130 135 140
158 Pro Pro Ala Ile Phe Lys Ser Met Cys Gln Ile Asp Val Arg Trp Phe
159 145 150 155 160
161 Pro Phe Asp Glu Gln Gln Cys His Leu Lys Phe Gly Ser Trp Thr Phe
162 165 170 175
164 Ser Glu Asn Leu Leu Ser Val Glu Leu Asn Glu Pro Ser Leu Arg Tyr

```

explanation
for Xaa is
mandatory
see p. 6.

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/010,873

DATE: 10/14/2004

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Input Set : A:\Sequence listing.txt

Output Set: N:\CRF4\10142004\J010873.raw

165 180 185 190
E--> 167 Glu Glu Glu Ile Asp Glu Lys Gly Ile Ile Asp Asn Val Xaa Xaa Xaa
168 195 200 205
E--> 170 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
171 210 215 220
E--> 173 Xaa Met Ser Arg Val Ala Lys Arg Arg Ala Lys Asn Tyr Pro Ser Cys
174 225 230 235 240
176 Cys Pro Gln Ser Ala Tyr Ile Asp Val Thr Tyr Tyr Leu Gln Leu Arg
177 245 250 255
179 Arg Lys Pro Leu Phe Tyr Thr Val Asn Leu Val Phe Pro Cys Val Gly
180 260 265 270
182 Ile Ser Phe Leu Thr Ile Leu Val Phe Tyr Leu Pro Ser Asp Ser Gly
183 275 280 285
185 Glu Lys Val Thr Leu Cys Ile Ser Ile Leu Val Ala Leu Thr Ile Phe
186 290 295 300
188 Phe Leu Leu Leu Thr Glu Ile Ile Pro Ala Thr Ser Ile Thr Leu Pro
189 305 310 315 320
E--> 191 Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
192 325 330 335
E--> 194 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
195 340 345 350
197 Thr His Leu Met Pro Asn Trp Val Lys Lys Val Phe Leu Lys Trp Leu
198 355 360 365
200 Pro Lys Leu Leu Phe Met Arg Arg Pro Ile Asp Asp Tyr Glu Glu Lys
201 370 375 380
203 Phe Asp Asp Lys Lys Lys Pro Lys Asp Gly Lys Ile Ala Leu Ser Val
204 385 390 395 400
206 His Ala His Arg Val Ser Asn Val Gly Asn Asn Ile Arg Asn Ala Thr
207 405 410 415
E--> 209 Ile Asp Asp Thr Ile Gln Lys Met Tyr Tyr Ser Pro Pro Xaa Xaa Xaa
210 420 425 430
E--> 212 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
213 435 440 445
E--> 215 Xaa Xaa Xaa Xaa Ile Asp Glu Asp Trp Lys Tyr Val Ala Met Val Leu
216 450 455 460
218 Asp Arg Leu Phe Leu Leu Ile Phe Ser Ile Ala Cys Phe Val Gly Thr
219 465 470 475 480
221 Val Ile Ile Leu Leu Arg Ala Pro Thr Leu Tyr Asp Thr Arg Gln Pro
222 485 490 495
224 Ile Asp Leu Gln Tyr Arg Pro Ala Asn Leu Ser Ala Asn Pro Ile Ser
225 500 505 510
227 Phe
230 <210> SEQ ID NO: 3
231 <211> LENGTH: 507
232 <212> TYPE: PRT
233 <213> ORGANISM: Caenorhabditis elegans
235 <400> SEQUENCE: 3
236 Met Met Leu Gly Gly Gly Gly Cys Gly Ala Gly Gly Thr Trp Leu
237 1 5 10 15

Same
error

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/010,873

DATE: 10/14/2004

TIME: 10:23:26

Input Set : A:\Sequence listing.txt

Output Set: N:\CRF4\10142004\J010873.raw

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239 Gly Phe Leu Val Phe Leu Ala Val Ser Leu Arg Asn His Ser Thr Cys
240                20                25                30
242 Glu Asp Ile Asp Ala Glu Asp Arg Leu Met Val Asp Leu Phe Arg Gly
243                35                40                45
245 Tyr Asn Ser Leu Val Gln Pro Val Arg Asn Arg Ser Glu Leu Pro Met
246                50                55                60
248 Ile Val Lys Ile Gly Met Gln Leu Val Leu Leu Ile Asn Val Asp Glu
249 65                70                75                80
E--> 251 Lys Glu Gln Val Met His Thr Asn Val Trp Leu Thr Met Lys Trp Xaa
252                85                90                95
E--> 254 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
255                100               105               110
E--> 257 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Trp Leu Pro Asp Ile Val Leu Phe
258                115               120               125
260 Asn Asn Ala Asp Gly Asn Tyr Glu Val Ser Phe Met Cys Asn Val Leu
261                130               135               140
263 Ile Leu Ser Thr Gly Thr Val Leu Trp Val Pro Pro Ala Ile Tyr Lys
264 145                150               155               160
266 Ser Ser Cys Ile Ile Asp Val Glu Phe Phe Pro Phe Asp Asp Gln Leu
267                165               170               175
269 Cys Ser Leu Thr Phe Gly Ser Trp Thr Tyr Asn Arg Asp Glu Ile Lys
270                180               185               190
E--> 272 Leu Asp Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
273                195               200               205
E--> 275 Xaa Xaa Xaa Xaa Xaa Xaa Met Asp Gly Pro Ala Val Leu Thr Ser Asp
276                210               215               220
278 Arg Ser Arg Ile Glu Phe Gln Ile Arg Ile Arg Arg Lys Thr Leu Phe
279 225                230               235               240
281 Tyr Thr Val Val Leu Ile Leu Pro Thr Val Leu Met Ala Phe Leu Asn
282                245               250               255
284 Val Thr Val Phe Tyr Leu Pro Thr Ala Ser Gly Glu Lys Met Gly Leu
285                260               265               270
287 Thr Met Asn Val Leu Leu Ser Ile Val Val Phe Leu Leu Val Ser
288                275               280               285
E--> 290 Lys Ile Leu Pro Pro Thr Ser Ser Ser Ile Pro Leu Xaa Xaa Xaa Xaa
291                290               295               300
E--> 293 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
294 305                310               315               320
E--> 296 Xaa Xaa Xaa Xaa Ile Tyr Phe Arg Ser Pro Ile Thr His Arg Leu Pro
297                325               330               335
299 Pro Trp Val Arg Lys Val Phe Leu Asp Ile Leu Pro Leu Leu Met Cys
300                340               345               350
302 Met Gln Arg Pro His Arg Lys Asn Val Ile Gln Arg Ser His Arg Arg
303                355               360               365
305 Leu Leu Glu Thr Gly Pro Ser Val Glu Glu Asn Pro Met Arg Ser Gly
306                370               375               380
308 Glu His His Pro Leu Cys Arg His Thr His Asn Gln Asp Ser Cys Arg
309 385                390               395               400
311 Arg Val Arg Ile Gln Ser Asp Glu Leu Asp Asp Glu Leu Ser Pro Glu

```

*some
error*

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/010,873

DATE: 10/14/2004
TIME: 10:23:26

Input Set : A:\Sequence listing.txt
Output Set: N:\CRF4\10142004\J010873.raw

```

312          405          410          415
E--> 314 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
315          420          425          430
E--> 317 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Phe Arg Asp Asp Trp Lys Phe Ile Ala
318          435          440          445
320 Ser Val Val Asp Arg Phe Leu Leu Tyr Gly Phe Phe Gly Ala Thr Val
321          450          455          460
323 Gly Gly Thr Ile Gly Ile Ile Phe Thr Ala Pro Ser Val Phe Glu Thr
324 465          470          475          480
326 Phe Asp Glu Asn Ala Thr Leu Val Lys Leu Lys Gln Leu Tyr Asp Met
327          485          490          495
329 Gly Leu Ala Asn Asp Thr Val Leu Gly Ile Phe
330          500          505
333 <210> SEQ ID NO: 4
334 <211> LENGTH: 493
335 <212> TYPE: PRT
336 <213> ORGANISM: Caenorhabditis elegans
338 <400> SEQUENCE: 4
339 Met Arg Thr Asn Arg Leu Ser Trp Ile Leu Val Leu Ser Val Val Ile
340 1          5          10          15
342 Phe Leu Val Ile Ile Asn Thr Ile Asn Ala Ser Asp Asp Glu Glu Arg
343          20          25          30
345 Leu Met Val Asp Val Phe Arg Gly Tyr Asn Ser Leu Ile Gln Pro Val
346          35          40          45
348 Arg Asn Ser Ser Glu Leu Pro Leu Ile Val Lys Met Ala Leu Gln Leu
349          50          55          60
351 Val Leu Leu Ile Asn Val Asp Glu Lys Asp Gln Val Met His Thr Asn
352 65          70          75          80
E--> 354 Val Trp Leu Thr Leu Gln Trp Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
355          85          90          95
E--> 357 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val
358          100          105          110
360 Trp Leu Pro Asp Ile Val Leu Phe Asn Asn Ala Asp Gly Asn Tyr Glu
361          115          120          125
363 Val Ser Phe Met Cys Asn Val Val Ile Asn His Lys Gly Asp Met Leu
364          130          135          140
366 Trp Val Pro Pro Ala Ile Tyr Lys Ser Ser Cys Ile Ile Asp Val Glu
367 145          150          155          160
369 Phe Phe Pro Phe Asp Glu Gln Val Cys Thr Leu Val Phe Gly Ser Trp
370          165          170          175
E--> 372 Thr Tyr Asn Glu Asn Glu Ile Lys Leu Glu Phe Xaa Xaa Xaa Xaa Xaa
373          180          185          190
E--> 375 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ile Asp
376          195          200          205
378 Val Pro Ala Ser Leu Val Asn Lys Arg Ser Arg Ile Glu Phe Gln Val
379          210          215          220
381 Arg Ile Arg Arg Lys Thr Leu Phe Tyr Thr Val Val Leu Ile Ile Pro
382 225          230          235          240
384 Thr Val Leu Met Ala Phe Leu Ser Met Ala Val Phe Phe Leu Pro Thr

```

Same error

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/10/010,873
 DATE: 10/14/2004
 TIME: 10:23:26

Input Set : A:\Sequence listing.txt
 Output Set: N:\CRF4\10142004\J010873.raw

```

385          245          250          255
387 Asp Ser Gly Glu Lys Ile Thr Leu Thr Ile Ser Val Leu Leu Ser Ile
388          260          265          270
390 Val Val Phe Leu Leu Leu Val Ser Lys Ile Leu Pro Pro Thr Ser Ser
391          275          280          285
E--> 393 Thr Ile Pro Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
394          290          295          300
E--> 396 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Tyr Phe Arg
397 305          310          315          320
399 Gly Pro Arg Thr His Arg Met Pro Gln Trp Val Arg Val Val Phe Leu
400          325          330          335
402 Gln Phe Leu Pro Lys Leu Val Cys Met Lys Arg Pro Lys Ser Ala Ser
403          340          345          350
405 Glu Arg Ser Ala Val Arg Ser Gly Met Ala Gln Leu Pro Gly Val Gly
406          355          360          365
408 Gln Phe Thr Leu Ser Pro Ser Ala His His Pro Leu Cys Pro Ser Ala
409          370          375          380
411 Asp Asp Arg Thr Thr Thr Ile Arg Asn Thr Ala Ser Asn Glu Thr Ser
412 385          390          395          400
E--> 414 Ala Tyr Tyr Pro Leu Ser Thr Asp Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
415          405          410          415
E--> 417 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Phe
418          420          425          430
420 Arg Asp Asp Trp Lys Tyr Val Ala Met Ile Ile Asp Arg Leu Leu Leu
421          435          440          445
423 Tyr Val Phe Phe Gly Ile Thr Val Gly Gly Thr Cys Gly Ile Leu Phe
424          450          455          460
426 Ser Ala Pro His Val Phe Gln Arg Ile Asp Gln Gln Glu Met Leu Asp
427 465          470          475          480
429 Arg Leu Lys Glu Lys Tyr Asp Thr Ala Ser Asn Ile Pro
430          485          490

```

*Same
error*

VARIABLE LOCATION SUMMARY

DATE: 10/14/2004

PATENT APPLICATION: US/10/010,873

TIME: 10:23:27

Input Set : A:\Sequence listing.txt

Output Set: N:\CRF4\10142004\J010873.raw

Use of n's or Xaa's (NEW RULES):

Use of n's and/or Xaa's have been detected in the Sequence Listing.

Use of <220> to <223> is MANDATORY if n's or Xaa's are present.

in <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

Seq#:2; Xaa Pos. 86,87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102,103
Seq#:2; Xaa Pos. 104,105,106,107,108,109,206,207,208,209,210,211,212,213
Seq#:2; Xaa Pos. 214,215,216,217,218,219,220,221,222,223,224,225,322,323
Seq#:2; Xaa Pos. 324,325,326,327,328,329,330,331,332,333,334,335,336,337
Seq#:2; Xaa Pos. 338,339,340,341,342,343,344,345,430,431,432,433,434,435
Seq#:2; Xaa Pos. 436,437,438,439,440,441,442,443,444,445,446,447,448,449
Seq#:2; Xaa Pos. 450,451,452
Seq#:3; Xaa Pos. 96,97,98,99,100,101,102,103,104,105,106,107,108,109,110
Seq#:3; Xaa Pos. 111,112,113,114,115,116,117,118,119,196,197,198,199,200
Seq#:3; Xaa Pos. 201,202,203,204,205,206,207,208,209,210,211,212,213,214
Seq#:3; Xaa Pos. 301,302,303,304,305,306,307,308,309,310,311,312,313,314
Seq#:3; Xaa Pos. 315,316,317,318,319,320,321,322,323,324,417,418,419,420
Seq#:3; Xaa Pos. 421,422,423,424,425,426,427,428,429,430,431,432,433,434
Seq#:3; Xaa Pos. 435,436,437,438,439
Seq#:4; Xaa Pos. 88,89,90,91,92,93,94,95,96,97,98,99,100,101,102,103,104
Seq#:4; Xaa Pos. 105,106,107,108,109,110,111,188,189,190,191,192,193,194
Seq#:4; Xaa Pos. 195,196,197,198,199,200,201,202,203,204,205,206,292,293
Seq#:4; Xaa Pos. 294,295,296,297,298,299,300,301,302,303,304,305,306,307
Seq#:4; Xaa Pos. 308,309,310,311,312,313,314,315,316,409,410,411,412,413
Seq#:4; Xaa Pos. 414,415,416,417,418,419,420,421,422,423,424,425,426,427
Seq#:4; Xaa Pos. 428,429,430,431

VERIFICATION SUMMARY

DATE: 10/14/2004

PATENT APPLICATION: US/10/010,873

TIME: 10:23:27

Input Set : A:\Sequence listing.txt

Output Set: N:\CRF4\10142004\J010873.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application Number
L:146 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:2
M:340 Repeated in SeqNo=2
L:251 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:3
M:340 Repeated in SeqNo=3
L:354 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:4
M:340 Repeated in SeqNo=4